CLAIMS

What is claimed is:

1. A peristaltic pump device, comprising:

a) an occlusion with a substantially constant radius;

b) a rotor, rotatable with respect to the occlusion;

c) at least one roller, disposed on the rotor; and

d) a depression, formed in the occlusion, and extending beyond the substantially constant radius of the occlusion.

2. A device in accordance with claim 1, wherein the depression has a curvature that is substantially concentric with the at least one roller when the at least one roller is positioned at the depression.

3. A device in accordance with claim 1, further comprising:

a flexible tube, disposed against the occlusion; and

the at least one roller being bearable against the tube to occlude the tube between the roller and the occlusion as the rotor rotates.

4. A device in accordance with claim 3, wherein the curvature of the depression has a radius to match a radius of the at least one roller with the tube occluded therebetween.

5. A device in accordance with claim 3, wherein the depression forms a parking position for the roller with a lower force applied by the tube to the roller relative to remaining locations of revolution of the at least one roller along the tube.

6. A device in accordance with claim 3, wherein the tube is fluidly coupled to an ink reservoir of a printer.

7. A device in accordance with claim 1, further comprising:

means for stopping the rotor with the at least one roller within a distance of the depression less than a diameter of the at least one roller.

8. A device in accordance with claim 7, wherein the means for stopping the rotor includes an item selected from the group consisting of: an encoder, a stepper motor, and control electronics.

9. A device in accordance with claim 1, wherein the depression is located nearer to a leading end of the occlusion.

10. A peristaltic pump device, comprising:

a) an occlusion having a substantially constant radius;

b) a rotor, rotatably disposed with respect to the occlusion;

c) a tube disposed against the occlusion;

d) at least one roller, disposed on the rotor, and bearable against the tube, to occlude the tube between the roller and the occlusion as the rotor rotates; and

e) a parking position with a lower force applied by the tube to the roller relative to remaining locations of revolution of the at least one roller along the tube, and including a depression formed in the occlusion.

11. A device in accordance with claim 10, wherein the depression has a curvature corresponding to a curvature of the at least one roller with the tube therebetween.

12. A device in accordance with claim 10, wherein the depression is concentric with the roller when the roller is positioned at the depression.

13. A device in accordance with claim 10, wherein the depression is located nearer to a leading end of the occlusion.

14. A device in accordance with claim 10, further comprising:

means for stopping the rotor with the at least one roller within a distance of the depression less than a diameter of the at least one roller.

15. A device in accordance with claim 14, wherein the means for stopping the rotor includes an item selected from the group consisting of: an encoder, a stepper motor, and control electronics.

16. A device in accordance with claim 10, wherein the tube is fluidly coupled to an ink reservoir of a printer.

17. A method for pumping a fluid, comprising:

a) rotating a rotor with at least one roller to occlude a tube between the at least one roller and an occlusion with a substantially constant radius to drive fluid through the flexible tube; and

b) stopping rotation of the rotor with the at least one rollerwithin a distance of a depression formed in the occlusion less than a diameter of the at least one roller.

18. A method in accordance with claim 17, wherein the step of stopping the at least one roller at or near the depression includes presenting the roller with a lower force applied by the tube to the roller at a location of revolution corresponding to the depression.

19. A method in accordance with claim 17, further comprising the steps of:

a) waiting to rotate the roller after stopping for at least one day; and

b) restarting rotation of the rotor with the roller at the depression.

20. A method in accordance with claim 17, wherein the step of introducing fluid further includes introducing ink.

21. A method for controlling a peristaltic pump for pumping a fluid, comprising the steps of:

a) rotating a rotor with at least one roller to occlude a tube between the roller and an occlusion with a substantially constant radius to drive the fluid through the flexible tube; and

b) stopping the at least one roller at a parking position with a lower force applied by the tube to the roller and within a distance of a depression formed in the occlusion less than a diameter of the at least one roller.

22. A method in accordance with claim 21, further comprising the steps of:

a) waiting to rotate the roller after stopping for at least one day; and

b) restarting rotation of the rotor with the roller at the depression.

23. A method in accordance with claim 21, further comprising the step of introducing ink to an inlet of the pump.

24. A printer, comprising:

a) an ink reservoir configured to contain ink;

b) a print head, operatively coupled to the ink reservoir, configured to print ink onto a print medium; and

c) a pump, operatively coupled between the ink reservoir and the print head, having a flexible tube disposed between an occlusion and at least one roller of a rotor rotatable with respect to the occlusion; and

d) the pump having a parking position with a lower force applied by the tube to the roller relative to remaining locations of revolution of the at least one roller along the tube, and including a depression formed in the occlusion.

25. A printer in accordance with claim 24, wherein the occlusion has a substantially constant radius; and wherein the depression has a curvature substantially concentric with the at least one roller when the at least one roller is positioned at the depression.

26. A printer in accordance with claim 24, further comprising:

means for stopping the rotor with the at least one roller within a distance of the depression less than a diameter of the at least one roller.

27. A printer in accordance with claim 26, wherein the means for stopping the rotor includes an item selected from the group consisting of: an encoder, a stepper motor, and control electronics.